

**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch  
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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:**Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-009952**Date Inspected:** 10-Oct-2009**Project Name:** SAS Superstructure**OSM Arrival Time:** 645**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1845**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Li Jha and Xu Yumin**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** OBG Trail Assembly**Summary of Items Observed:**

On this day CALTRANS OSM Quality Assurance Inspector (QA) S. Manjunath. Math was present during the times noted above for observations relative to the work being performed.

Orthotropic Box Girder (OBG) Trial Assembly Area

Segment 5AE

This Quality Assurance (QA) Inspector witnessed final tension verification for Lower Chevron Angle connecting the Splice Plate at PP 29, PP 30 and PP 31 for Segment 5AE (North and South side). Inspected 10% on a random basis and found the tension to be in general compliance.

Bolt sizes used are M22x75 RC Lot No. DHGM220005 and final Torque required was 473 N-m .

Manual Torque wrench has been used with Serial No. XQ2-599.

Segment 5BE

This Quality Assurance (QA) Inspector witnessed final tension verification for Lower Chevron Angle connecting the Splice Plate at PP 32, PP 33 and PP 34 for Segment 5BE (North and South side). Inspected 10% on a random basis and found the tension to be in general compliance.

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Bolt sizes used are M22x75 RC Lot No. DHGM220005 and final Torque required was 473 N-m .

Manual Torque wrench has been used with Serial No. XQ2-599.

### Segment 5CE

This Quality Assurance (QA) Inspector witnessed final tension verification for Lower Chevron Angle connecting the Splice Plate at PP 35 and PP 34 for Segment 5CE (North and South side). Inspected 10% on a random basis and found the tension to be in general compliance.

Bolt sizes used are M22x75 RC Lot No. DHGM220005 and final Torque required was 473 N-m .

Manual Torque wrench has been used with Serial No. XQ2-599.

### Segment 5AE

This Quality Assurance (QA) Inspector witnessed final tension verification for Lower Chevron Angle connecting the Floor Beam Flange to Angle at PP 29, PP 30 and PP 31 for Segment 5AE (North and South side). Inspected 10% on a random basis and found the tension to be in general compliance.

Bolt sizes used are M22x65 RC Lot No. DHGM220033 and final Torque required was 470 N-m but turn of nut been performed by heavy duty spanners to approximately 150 to 180 Degrees.

### Segment 5BE

This Quality Assurance (QA) Inspector witnessed final tension verification for Lower Chevron Angle connecting the Floor Beam Flange to Angle at PP 31 for Segment 5BE (North and South side). Inspected 10% on a random basis and found the tension to be in general compliance.

Bolt sizes used are M22x65 RC Lot No. DHGM220033 and final Torque required was 470 N-m but turn of nut been performed by heavy duty spanners to approximately 150 to 180 Degrees.

### Signed Off Green Tag's

This Quality Assurance (QA) Inspector witnessed final tension verification for following depicted locations. Inspected 10% on a random basis and found the tension to be in general compliance and thus signed off the Green Tags.

At Segment 5CE at PP 35(N) Lower Chevron Brace and Bolt Size used was M22 x 70 RC Set# DHGM220004 and final torque required was 453 N-m and Green Tag No. 364.

At Segment 5CE at PP 35(N) Lower Chevron Brace and Bolt Size used was M22 x 80 RC Set# DHGM220050

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and final torque required was 486 N-m used hydraulic torque machine at 23 Mpa for tension verification and Green Tag No. 365.

At Segment 1AE and 1BE at PP 8.5 to PP 12 Cat Walk Support and Bolt Size used was M16x45 RC Set# DHGM160010 and final torque required was 453 N-m and Green Tag No. 366.

At Segment 5AW, 5BW and 5CW at PP 29, 30, 31, 32, 33, 34, 35 and 36 Floor Beam to Bottom Panel Clips and Bolt Size used was M16 x 45 RC Set# DHGM160002 and final torque required was 250 N-m and Green Tag No. 367.

At Segment 5AW, 5BW and 5CW at PP 29, 30, 31, 32, 33, 34, 35 and 36 Floor Beam to Bottom Panel Clips and Bolt Size used was M16 x 65 RC Set# DHGM160006 and final torque required was 180 N-m and Green Tag No. 368.

At Segment 5BW and 5CW at PP 32, 33, 34, 35 and 36 Floor Beam to Side Panel Clips and Bolt Size used was M16 x 45 RC Set# DHGM160002 and final torque required was 250 N-m and Green Tag No. 369.

At Segment 5BW and 5CW at PP 32, 33, 34, 35 and 36 Floor Beam to Side Panel Clips and Bolt Size used was M16 x 65 RC Set# DHGM160006 and final torque required was 180 N-m and Green Tag No. 370.

At Segment 5BW at PP 32, 33 and 34 Floor Beam to Side Panel Clips and Bolt Size used was M16 x 50 RC Set# DHGM160003 and final torque required was 200 N-m and Green Tag No. 371.

At Segment 2AE at PP 14, 15 and 16 FL3 Web Plate to Bottom Plate and Bolt Size used was M24 x65 RC Set# DHGM240008 and final torque required was 547 N-m and Green Tag No. 372.

At Segment 2AE at PP 14, 15 and 16 FL3 Web Plate to Bottom Plate and Bolt Size used was M24 x 60 RC Set# DHGM240014 and final torque required was 567 N-m and Green Tag No. 373.

At Segment 2AW at PP 14, 15 and 16 FL3 Web Plate to Bottom Plate and Bolt Size used was M24 x 65 RC Set# DHGM240009 and final torque required was 567 N-m and Green Tag No. 374.

At Segment 2AW at PP 14, 15 and 16 FL3 Web Plate to Bottom Plate and Bolt Size used was M24 x 60 RC Set# DHGM240014 and final torque required was 567 N-m and Green Tag No. 375

Segment 1AE to 1AAE

This QA Inspector observed ZPMC welding personnel performing Shielded Metal Arc Welding (SMAW) and Submerged Arc Welding (SAW) for Transverse Segment weld at Deck Panel and welding been performed against B-CWR829. The weld joint has been identified as OBW1-001. The welder is identified as 046830 and 0479769. In process SAW and SMAW appears to be progressing in compliance with Caltrans Engineer Approved welding procedure i.e., WPS-345-SAW-1G-Repair-1 and WPS-345-SMAW-1G (1F) – Repair-1.

Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract

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documents.

### Summary of Conversations:

No relevant conversations.

### Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact , who represents the Office of Structural Materials for your project.

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<b>Inspected By:</b>	Math,Manjunath
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Quality Assurance Inspector
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<b>Reviewed By:</b>	Carreon,Albert
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QA Reviewer
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